

MULTISTAGE PROCESS FOR REMOVAL OF SULFUR FROM
COMPONENTS FOR BLENDING OF TRANSPORTATION FUELS

ABSTRACT OF THE INVENTION

- 5 Economical processes are disclosed for the production of fuels of reduced sulfur content from a feedstock, typically derived from natural petroleum, wherein the feedstock is comprised of limited amounts of sulfur-containing organic compounds as unwanted impurities. The processes involve integrated, multistage processes which include pretreatment of a light naphtha with a solid adsorbent to remove basic nitrogen
- 10 containing compounds, chemical conversion of one or more of the sulfur-containing impurities to higher boiling products by alkylation, and removing the higher boiling products by fractional distillation. Advantageously, the processes include selective hydrogenation of the high-boiling fraction whereby the incorporation of hydrogen into hydrocarbon compounds, sulfur-containing organic compounds, and/or nitrogen-
- 15 containing organic compounds assists by hydrogenation removal of sulfur and/or nitrogen. Products can be used directly as transportation fuels and/or blending components to provide, for example, more suitable components for blending into fuels which are more friendly to the environment.
- 20